9(R)-HODE
Item No. 38405

CAS Registry No.: 10075-11-3
Formal Name: 9R-hydroxy-10E,12Z-octadecadienoic acid
Synonym: 9(R)-Hydroxyoctadecadienoic Acid
MF: C₁₈H₂₉O₃
FW: 296.5
Purity: ≥98%
UV/Vis.: λ_max: 234 nm ε: 23,000
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 year

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Labloratory Procedures

9(R)-HODE is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 9(R)-HODE in these solvents is approximately 50 mg/ml.

9(R)-HODE is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 9(R)-HODE should be diluted with the aqueous buffer of choice. The solubility of 9(R)-HODE in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

9(R)-HODE is a monohydroxy fatty acid and metabolite of linoleic acid (Item Nos. 90150 | 90150.1 | 21909). It is formed from linoleic acid by COX and lipoxygenase (LO). 9(R)-HODE induces chemotaxis, increases the levels of chemokine (C-C motif) receptor 9 (CCR9) and chemokine (C-X-C motif) receptor 4 (CXCR4), and inhibits IL-6 release in primary human monocytes. It inhibits CD3α- and CD28-induced proliferation of isolated human peripheral blood lymphocytes when used at a concentration of 25 µg/ml.

References

5. Rolin, J., Vego, H., and Maghazachi, A.A. Oxidized lipids and lysophosphatidylcholine induce the chemotaxis, up-regulate the expression of CCR9 and CXCR4 and abrogate the release of IL-6 in human monocytes. Toxins (Basel) 6(9), 2840-2856 (2014).